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WIRELESS COMPETITION: AN UPDATE

By

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Wireless Competition: An Update

By Robert Hahn and Hal Singer

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Wireless Competition: An Update

Along with a former chief economist of the Federal Communications Commission (FCC), we recently published an article in the *Federal Communications Law Journal* that critiques the way the FCC conducts competition analysis in the wireless industry. To get up to speed, you need to know these facts: For over a decade, as wireless prices fell and industry concentration inched upward, the FCC concluded that the wireless market was competitive. Under new leadership but with the same fact pattern—prices continued to fall, concentration continued to rise—the Commission changed its tune. For the last two years, it retracted its stamp of competitiveness in favor of a "too-close-to-call" decision.

Ignoring politics, we can think of two plausible explanations for the agency's change of heart. Under the first explanation, the FCC previously weighted direct evidence of competition such as falling prices more heavily than indirect evidence such as concentration, but it elected to place more weight on indirect evidence in the last two competition reports. Under the second explanation, the FCC did not change the weights, but it instead felt that concentration reached some critical threshold such that the societal loss associated with any more concentration was unacceptable. We don't find either explanation persuasive.

Because the wireless market is dynamic, static measures are ill-suited to capture market power and perhaps downright misleading

Although we cannot (as outsiders) rule out the first explanation empirically, de-emphasizing direct evidence of market power in favor of concentration ratios runs against the current grain of academic and antitrust practice. A recent article by Professor Kaplow in the *Harvard Law Review* explains why market shares are generally a poor proxy for market power: In all but static homogenous markets, a firm's power over price—captured in the classic Lerner Index—cannot be expressed as a function of its shares. In other words, market shares convey evidence of pricing power in homogenous markets only. With the exception of markets in things like pork bellies and lemonade stands, the modern economy is generally not characterized by homogenous product markets. Rather than competing with the identical good at a lower price, many firms compete with a differentiated good, and if the relative quality warrants, at a higher price. Because wireless firms compete in several non-price dimensions—handsets, network quality, network ubiquity—the homogeneous model does not fit well.

Even if the wireless industry could be properly characterized as non-differentiated as lemonade, for market shares to convey pricing power, you need something else: entry barriers. While entry hasn't occurred sufficiently fast to reverse the trend toward more concentration, two important developments undermine the notion that entry barriers are insurmountable. First, Leap and MetroPCS have emerged as legitimate, nationwide competitors taking share primarily from T-Mobile and Sprint at the "no-frills" end of the market. Second, Clearwire (and until it ran into regulatory problems, LightSquared) obtained sufficient spectrum to serve as a carrier's carrier for any upstarts who lacked

resources to build their own networks. By Deutsche Bank's estimates, Clearwire owns 30 percent of all spectrum "in use or reserved for additional LTE capacity" on a MHzPop basis; by comparison, AT&T and Verizon have 18 and 19 percent, respectively. Moreover, if the FCC approves Dish's spectrum for terrestrial use, these spectrum shares would be even smaller.

With respect to the second explanation—that concentration reached a tipping point between the 13th and 14th reports—the data do not justify the FCC's policy reversal. In its 14th Competition report, the weighted average HHIs across all economic areas in the United States was 2842 (as of the end of 2008). In its 13th Competition report—the last report in which the agency declared the industry to be effectively competitive—the HHI was 2675 (as of the end of 2007). The problem for the FCC is that there is no recognized demarcation at HHI levels of 2700. Instead, the *Merger Guidelines* place that (subjective) demarcation at 2500; at that point, an industry moves from "moderately concentrated" to "highly concentrated." According to the FCC's own concentration data, the industry has been "highly concentrated" since 2005 (when the HHI was 2706), yet the agency continued to classify the industry as effectively competitive based on data in 2005, 2006, and 2007. It is by no means clear that industry concentration reached a critical threshold in 2008, when the FCC changed its conclusion from effectively competitive to "too-close-to-call."

Consumers are reaping benefits here in all forms and sizes

In the executive summary to the 13th Report, the FCC correctly inferred competition from declining prices: "The *Thirteenth Report* finds that U.S. consumers continue to reap significant benefits—including low prices, new technologies, improved service quality, and choice among providers—from competition in the CMRS marketplace, both terrestrial and satellite CMRS. The metrics below indicate that there is effective competition in the CMRS market . . ." The same argument can be made today.

At a macro level, the cellular CPI continues to fall. Since 2002, the price of wireless services has declined in every year except 2008 (when prices were the same as 2007). In December 2002, wireless prices were 33 percent less than what they were in December 1997. In December 2011, wireless prices were 41 percent less than what they were in December 1997. To square these trends with a conclusion of heightened market power among wireless carries, one would need to believe that the costs of providing wireless service has declined, and has done so at an even faster clip than the rate of deflation in the price of wireless service. Because wireless carriers are facing capacity constraints, however, many notable economists have argued that carriers are moving along an increasing cost curve, rendering the notion of rapidly declining costs implausible.

The same phenomenon of falling prices is occurring for wireless data. According to Nielsen, the cost of data services has declined nearly 90 percent since 2008, from $0.47 per MB down to only $0.05 per MB.

Some naysayers have argued that wireless prices are only falling for the privileged few who consume large buckets of minutes. This argument conveniently ignores the important inroads that no-frills carriers have made in the marketplace. In the Washington,

D.C. metro area, for example, Leap offers a $35 per month plan that includes unlimited voice and texting, and T-Mobile offers a $35 per month plan with 500 minutes. Virgin Mobile, a wireless reseller, offers a $35 per month plan that includes unlimited data use and 300 anytime minutes. To claim that inexpensive plans are not available to budget-constrained customers is to ignore the evidence.

Spectrum policy is the key lever that drives competition

Why was there a change in the outlook of regulators? The best explanation we can come up with is that a competitive outlook would not work well with a more interventionist agenda, such as blocking spectrum transactions, mandating wholesale access (roaming) at regulated rates, and placing prohibitions on handset exclusivity. Unfortunately, such intervention by the FCC in the wireless services industry could have significant adverse effects on investment, competition, and consumers. As demonstrated above, wireless services are in fact competitively supplied. Consumers are facing historically low prices for both wireless voice and data, and they have unparalleled options for handsets and service providers.

Although there were numerous policy issues embedded in the last few wireless competition reports released by the current FCC, we focus here on spectrum policy: secondary market transactions and allocation of new spectrum.

With respect to secondary market transactions, the FCC aggressively moved to block AT&T's acquisition of T-Mobile, and the agency is now putting Verizon's proposed acquisition of SpectrumCo through a microscopic review. While the AT&T transaction would have eliminated an actual (albeit weak) competitor, Verizon's deal would not. It seems that any transaction that adds more spectrum to the two largest carriers will be met with great skepticism.

Although he does not represent the FCC (he is a senior advisor to the Federal Trade Commission), Professor Tim Wu's congressional testimony on the Verizon-SpectrumCo transaction may shed light on the agency's new approach to secondary market transactions. If the FCC approves the Verizon-SpectrumCo transaction, Wu argued, then there will be no principled basis for stopping any future acquisition by AT&T or Verizon: "This transaction (and others like it) does not threaten to be the grand coup that ends competition in our time. The danger, rather, is the prospect of a 'creeping duopoly' in wireless . . ." Wu's approach could block mergers or acquisitions that are socially beneficial, and it places a very high burden of proof on the industry leaders, AT&T and Verizon. Under his formulation, "there is always a tradeoff between concentration and competition." What Wu fails to appreciate, however, is that his posited inverse relationship is not supported by the data: Prices have fallen as concentration has increased. Moreover, his no-more-concentration stand would ban MetroPCS's or Leap's acquisition of SpectrumCo's spectrum, as those deals would also increase concentration at the margin. As explained above, regulators should not draw a bright line at HHIs of 2700 and declare all future transactions anticompetitive. A more subtle competition analysis is required.

The second area of spectrum policy that deserves a rethink is allocation of new spectrum. The most likely explanation for why wireless prices continue to fall despite an uptick in concentration is the introduction of new spectrum and its associated capacity, which managed to find its way into the hands of potent entrants such as Leap, MetroPCS, and Clearwire. Unfortunately, there hasn't been enough spectrum supply to keep up with the demand among existing wireless carriers. A common measure of capacity in the wireless industry is the ratio of a carrier's subscribers (in millions) to its average spectrum (in MHz). By this measure, AT&T (1.09) and Verizon (1.15) face more binding capacity constraints than do Sprint (0.98), T-Mobile (0.64), or Clearwire (0.03). As a result, absent an infusion of new spectrum, certain carriers face a spectrum crunch that can only be addressed through rationing of capacity in the form of higher prices or limited usage. This is true even after taking into account improvements in radio-frequency technologies like LTE and deployment of distributed antenna systems, femtocells, and offload to WiFi. The best way to avoid this outcome is to move as much spectrum as possible into the marketplace.

Although there is a general consensus in the wireless industry that more spectrum would be helpful, there is still a deep divide over how best to allocate that spectrum. In particular, many of the smaller (and rural) carriers would like to see most, if not all, of the spectrum be quarantined from larger carriers—read AT&T and Verizon. The quarantine presumably would be achieved the old-fashioned way, by setting aside spectrum for designated bidders. Although we are sensitive to the possibility that large incumbents might acquire spectrum for exclusionary purposes (there is no credible evidence that these companies have done so), we believe the use of set-asides is the wrong way to approach the problem. While set-asides are a clear boondoggle to smaller carriers who are immunized from price competition at auction, wireless customers may suffer from set-asides due to a potential misallocation of scarce resources. Although set-asides were peddled as a means to promote smaller entrants and to limit the spectrum holdings of larger carriers, the practical effect of set-asides was to compel larger carriers to subsidize entry of their rivals. As explained by Professors Hazlett and Munoz, prior efforts by regulators to extract additional surplus from incumbent carriers, including the use of bidding credits for weak bidders, have cost society much more in terms of lost (or delayed) consumer welfare than they have generated in additional auction proceeds.

Given how competitive the wireless marketplace looks today, regulators should keep in mind that the benefits of injecting even more competition at the margin (by changing the auction rules) could be small, whereas the costs of failing to satisfy the spectrum demands of incumbent carriers and of inducing uneconomic entry (think NextWave) may be significant. As explained by Ofcom, the FCC's counterpart in Europe, a combination of above-1 GHz spectrum and a small injection of below-1 GHz spectrum is sufficient for entrants to compete effectively. The bottom line is that skilled auction designers should be able to figure out how to facilitate entry without having to resort to set-asides.

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